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The Place of the Field Station in Veterinary Education *

I.—By J. G. WRIGHT

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The principle of the field station as an essential part of a veterinary school is now generally accepted. Our colleges are situated in the centres of large cities and as such tend to be out of contact with farm animals, the health and welfare of which are our primary concern. During the period between the wars the practical energies of both staff and students had tended to be confined very largely to domestic pets and instruction in so far as animals of the farm were concerned had become chiefly theoretical. The Royal College, appreciating this fact, introduced extra-mural instruction by insisting that students should spend their vacations seeing practice and produce at the time of their final examination, evidence that they had seen certain representative cases of disease in farm animals. The onus of obtaining this extra-mural instruction lay with the student. It is not my intention to-day to discuss the merits of extra-mural teaching other than to say that the responsibility for giving an adequate course of instruction lies with the schools and outside teaching at best must only be looked upon as an adjunct to it.

A sound knowledge of the behaviour and management of animals in health is essential as a foundation for the development of the education necessary for entry into our profession. Moreover, if that education is to be real, it is vital that the students' attention shall throughout his course be directed to the animal itself rather than to lecture-room or text-book descriptions. In this connection our requirements are greater than those of medicine in that much of the foundation to which I refer as it applies to the human being is common knowledge. The provision of adequate instruction in this basic material becomes the more important as a considerable proportion of our students are recruited from towns with little or no preliminary knowledge of farm animals. Finally, if the staffs of our schools are to exert their full measure of usefulness as teachers and original observers, it is necessary that farm-animal material in sufficient amount and variety shall be available to them.

It may be said: if the arguments you advance are sound, then veterinary colleges in their entirety, with the exception of a small-animal clinic, should be located in the country and the question of field stations arises only as a temporary expedient. That is not my view. The first and obvious answer is that most of our colleges possess so much by way of bricks and mortar in the cities that economy demands that they shall continue to utilise them. But there are other and more important answers. Higher education infers more than mere technical training. The schools possess these young people during the most formative years of their lives and if the profession of the future is to occupy its rightful place in the affairs of the nation it is imperative that they shall obtain during those years something more than the technicalities necessary for them to practise a profession. It is generally accepted that there is no better medium for such mind broadening than the general university environment. Thus we should require our students to remain as long as possible within the walls of the university where they are continuously rubbing shoulders with students of other learned callings. We should require them wherever possible to reside in the university hostels and take their part in all student activities; cultural, social and athletic. Such contacts serve not only to broaden the outlook of our students but to stimulate an understanding and an appreciation of ourselves by those preparing for other professions. Again, there is much in our pre-clinical studies which is in measure common to students of other professions—science, medicine, agriculture—and it is better that our students during their early years of study shall sit alongside these in the common university department rather than in the isolation of the relatively small, college department. Not the least of the advantages of such a system is the mutual appreciation of standards and ability it engenders. Finally, the town is still the best source of much of the material necessary for the proper instruction of our students. I have in mind commercial horses, dogs and cats, the abattoir and the knackery.

Thus, the amount of time spent by the student in the relative isolation of the field station should be no more than that absolutely necessary for our special educational requirements.

The first consideration in regard to the field station of which I shall speak is its site. Siting requirements are exacting. Clearly, it should be in a rural setting in close proximity to a large farm-animal population. Before selecting it careful attention should be given to the manner in which that animal material is to become available for teaching. This is a matter to which I shall refer in some detail later. But the field station should be sufficiently close to the city that there is easy access between it and the college by road or rail. In my view, the distance between them should not be more than 20 miles or one hour's journey. On no account should there be isolation. The college departments and the field station have so much to gain by close collaboration that there must be almost daily contact between them. Again, it is important that the staff at the field station shall play their part in the general academic administration of the school. It is probable that departmental chiefs will have duties to perform in both places. Finally, the town must be comparatively near for the 101 purposes for which staff and students will wish to go there.

What departments should be situated at the field station? In considering this matter I must say at the outset that for the full utilisation of a field station I feel that some modification of the traditional college departments will be required. There can be no doubt that the field is the proper venue for animal husbandry, but in regard to the clinical departments I think we should depart from the existing divisions of medicine and surgery and replace them by a farm-animal clinical department (including the horse) at the field station, and a small-animal division in the city. Preventive medicine shall have a separate place. What about pathology? As we regard this subject at the moment, certain parts will better be dealt with at the college and others at the field station. Here again I think some sub-division is required. While the fundamentals of morbid anatomy, bacteriology and parasitology, together with meat inspection, might well be dealt with at the college, hygiene and preventive medicine are more appropriate to the field. Just how such divisions are to be effected, will be a matter for the individual colleges to decide.

How long should the student spend at the field station and at what periods during his course? This also is a matter about which we should not dogmatise at this stage. At the outset our views should be fluid so that they may readily be adjusted as future experience demands. My own ideas, for example, are somewhat different now from five years ago. We have to adopt our course to utilise to the best purpose the facilities we have both in the town and in the country. There will certainly be difficulties, for neither students nor staff can be in two places at once. Moreover, financial considerations will probably play an important part in this connection. An integral part of the field station is the students' hostel. I do not think there will be much argument about the statement that if the field station is to serve its full purpose, students must live on the spot.

But if a students' hostel is to be run with reasonable economy, it is essential it shall be fully occupied for the greater part of the year. If it is designed to accommodate the students of any one year at a time, I think it can be run economically. But if it is intended that students of two years of study shall be in residence for overlapping periods, then I visualise grave financial and staffing complications. May I outline to you the lines along which we propose to proceed at Liverpool? We are fortunate that in ordinary times the number of students in any one year will not exceed 30. For this reason we aim to provide hostel accommodation for about 40. This will allow for the housing also of unmarried staff and post-graduate students. Practical animal husbandry and farm-animal clinical work is being dealt with at the field station and as soon as it is possible to erect new buildings, it is proposed to develop a department of preventive medicine there also. During the summer vacation at the end of the sixth term of study, students will attend for a month's course in farm-animal management. They will next come to the field station for

* Papers presented in opening discussion of this subject by the Association of Veterinary Teachers and Research Workers (Southern Region) at the meeting held on January 10th, 1948, at the Royal Veterinary College, Camden Town.

the whole of the eleventh term. (It will be recalled that the third examination, comprising the animal husbandry and the pathology groups, will be held at the end of the twelfth term.) This is a Lent term but it is proposed to alter its period from the traditional January-March to February-April. During this period they will do practical animal husbandry and they will commence their study of farm-animal clinical work and preventive medicine. When they come to their final year they will spend the autumn and summer term at the field station, continuing with farm-animal clinical work and preventive medicine, and the Lent term at the university where they will be completing their instruction in small-animal clinical work, meat inspection and applied anatomy. Thus you will see that of the whole course of 15 terms, they will spend three terms and one month vacation course at the field station. Having regard to all the factors with which we have to contend we believe this to be the optimum division. It is compulsory for students at Liverpool to produce evidence that they have worked on farms during the vacations of their first and second years of study and the seeing of practice with veterinary surgeons during this period is discouraged.

How shall farm-animal material for teaching be obtained? Animal husbandry presents little difficulty, for one of the features of the field station should be an animal husbandry unit comprising a small dairy herd, a few steers for fattening, several working horses, a small herd of pigs and flock of poultry, a few ewes. As they are the property of the station they will be available for handling by students at all times. I do not think large numbers are required nor should the individuals be of high value: their main purpose is the teaching of students and experiments. For general instruction there should be available in the vicinity of the station a number of herds of differing breeds and types maintained under varying conditions of farming and dairying. It is important, I think, that not too much time shall be occupied by the staff acting as general farmers. It is probable that a bull or two will be kept and that artificial insemination will be a feature of the work of the station. But here I would utter a note of warning: I see no essential connection between the field station and an artificial insemination centre and unless care is taken to avoid it, it may be found that far too much of the time of the staff is being taken up in this work.

But the provision of an adequate amount and variety—and I would stress the word variety—of material for clinical instruction is a more difficult matter. Frankly, I am not attracted to the system of running a general veterinary practice from the field station, for I feel that such a practice must inevitably provoke antagonism by practitioners in the vicinity who have every right to regard it as unfair competition if only from the viewpoint of the publicity any public institution must inevitably attract to itself. Again I believe the collaboration of the adjacent practitioners to be essential to success for by this collaboration the field station is able to draw on an animal population infinitely greater than would be the case in a single practice. But there are other reasons for my objection. A practice is in every way unsuitable as a part of a teaching and research institution. Teachers cannot afford to spend the greater part of their time travelling about, which the running of a practice necessitates. Moreover, under the fee paying system one is not at liberty to attend the cases accompanied by students as frequently as one should if those cases are to yield full fruit as a teaching medium.

Our system is to have attached to the field station a series of farms, at the moment five in number, where we do all the veterinary work and which are available for teaching purposes at all times. Between them they contain some 260 dairy cows, 70 ewes, 40 breeding sows, with the followers of each species, and numerous poultry. An important point is that they shall provide variety—they should not all be perfectly run, attested farms. They serve as a valuable medium for teaching routine veterinary procedures, obstetrics, and also for original investigations by members of the staff.

As regards the hospital at the field station, if it is able to attract between 100 and 200 individual farm-animal cases a year, then I think it is doing good work. We have recently been regaled with almost staggering figures from America. I have been brought up to regard figures with the gravest suspicion and before drawing conclusions from them, submitting them to the closest scrutiny. It is not a difficult matter to swell the figures and to impress the uncritical by including every lamb that receives a worm dose, every little pig that is castrated, every cow submitted to the tuberculin test and so on. There is a very definite limit to the number of hospital cases that can be fully investigated and dealt with and without a full investigation and discussion of all the evidence obtainable, veterinary teaching as a science fails.

I will conclude my remarks by saying that in my view a country station is an essential part of a veterinary teaching institution, and that its success will depend not so much on its broad acres and magnificent buildings, but on the skill, the tact and the forbearance of its staff.

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II.—By A. D. McEWEN

Moredun Institute, Edinburgh

I propose to talk about the ideal field station and my remarks do not apply to any field station in existence or proposed by any particular college.

No one can altogether escape the influences of early environment and education and these often determine our conduct. The profession is assessed not only on the professional competence of individual members but upon individual members' behaviour and conduct; therefore no review of the functions of veterinary education can disregard the effects this education may have on the social habits and behaviour of the student.

Professional competence, using this term in its narrowest sense, should and must be enhanced by training at a well-organised field station, but the field station should also be used to extend the range of professional competence into fields where the veterinarian is seldom found and at the same time it should give the veterinary graduate a basic knowledge of agriculture whereby he will be better qualified to participate and to lead in the life of the agricultural community where his daily work will be.

Were education at a field station to stimulate the cultural life of the student, increase his professional competence and widen the range of that competence, it would be of far-reaching benefit.

The role of the field station may therefore be considered under two main headings:—

1. The influence on the general and cultural life of the student.
2. Its influence on veterinary education and on an extension of veterinary interests.

It is assumed that future veterinary students possess a good education, including a grounding over a period of several years at school in physics, chemistry and biology. In a recent contribution to *The Veterinary Record* Sir Frank Ware advocates the pre-clinical education of the veterinary student at the field station, suggesting that the last two or three years should be spent at the university where the student would develop his cultural and other interests. I regard it as essential to good education that the student should commence his training at the field station, but go further, suggesting that all but the final year should be spent there. This conception of the first years at the field station is not in agreement with the Loveday Report which saw no reason why the pre-clinical subjects should be taught in a veterinary environment. In its description of the Liverpool School, Chapter XII, par. 68, the Report says: "For much of the teaching in the earlier portions of the course at the School the veterinary students merge with those of other faculties. Such subjects as physics, biology, physiology and biochemistry are taught, as to fundamentals, to medical and veterinary students alike. We have nothing to criticise in this part of the training. The Chairs are occupied by men of eminence, there are sufficient lecturers and demonstrators, and the equipment and laboratory facilities are good." Clearly a separation of the pre-clinical from the clinical years is accepted, if indeed it be not regarded as desirable.

In medical education, the Goodenough Report deplores this separation and recommends measures to do away with it, saying "As part of the measures necessary to bridge the gap between the pre-clinical and clinical periods, an overlap of personnel engaged in the two periods would be advantageous and there should be greater access to patients for the teaching of anatomy and physiology." Again, "Much physiology as well as anatomy can be taught on the living subject and the teaching in both subjects gains very considerably if at the same time students are presented with patients illustrating deviations from the normal." The Goodenough Report would not have accepted the teaching of physiology to medical students by veterinary physiologists in a veterinary school, no matter how illustrious the teachers and complete the laboratory equipment.

If it be desirable to teach physiology and anatomy on the live animal, it must be taught at the field station. But will this mean sacrifices in the cultural life? The social and cultural influences of university life are very generally accepted as real and beneficial but these are seldom analysed and criticised as they affect the majority of students, and are probably over-estimated. In the modern university with large numbers of students, it is only the favoured or the fortunate few who participate actively in the social life, whether in sport or in more intellectual pursuits. You may have noticed in the *Lancet* that at Aberdeen 80 per cent. of the University students take no part in any recreational exercise, their lives being spent between the lecture room, the laboratory and their lodgings. This dull, uninspiring student existence falls far short of the popular conception of a social and cultural life outside the class room. A smaller community may enjoy a more vigorous social life as I witnessed at the South Eastern Agricultural College before 1939. Here was an agricultural college with from 150 to 180 students living in contact with the life of the small community of the village or town in which it was situated. One walked out of the college quadrangle into the village street with its church,

café, pub., grocer's shop, barber's shop, the blacksmith's forge and the homes of the inhabitants. Half of the students lived in and the remainder were in approved lodgings. The students knew and were known to the inhabitants and the activities of the college and the behaviour of the students were potent influences in the community. This intimacy exercised its beneficial influence on student behaviour, which was largely self-disciplined. The whole community was not too large for the individual ever to become a nonentity. In the realm of sport but a small minority did not participate in one or other of the many activities. The dramatic club produced plays twice a year, the debating society prospered and drew informed speakers from outside, the orchestra, the photographic and the chess and other clubs all contributed to the cultural life. The college dances and the college cricket week held at the end of the summer term, with its day and evening functions, were events of importance in the social life of the neighbourhood. As a result of these many and varied activities, the students enjoyed a social experience which was of lasting benefit in later years. Manners were cultivated and I have often been impressed by the ease and facility with which individual students conducted themselves and were able to express themselves in public. I believe there is little to be lost socially and culturally, and much that may be gained, by educating veterinary students at a field station, provided life at the station is moulded into that of the surrounding county and the social and cultural aspects are wisely fostered.

With regard to professional education, anatomy and physiology should start at once along with instruction on general farming methods and the management of farm animals. Instruction in farming and animal management should not be given in the lecture room but by discussion, observation and practice in the field, the barn and the animal house. Farming and some aspects of animal management have cycles extending over one or more years and without conscious effort or study, a student during four years should acquire a good knowledge of farming methods and practices, an appreciation of problems of the soil and its fertility and of the management and improvement of grassland and some realisation of farm economics. On the animal husbandry side he should early lay a foundation for more advanced study by acquiring a practical knowledge in the management and feeding of stock of all kinds. The techniques of milking, the cleaning and sterilisation of dairy equipment and the function of milk recording would all become familiar early in the student's career.

Anatomy and physiology should be taught together and not as unrelated subjects, deleting the unnecessary accumulation of anatomical detail acquired by dull hours at the dissection table. A general knowledge of the subject rather than a detailed study should be the first objective. For instance, the anatomy, physiology and essential histology of the digestive, respiratory, excretory, reproductive and nervous systems should be acquired as early as possible, using for instruction the live animal, the fresh cadaver, and when desirable prepared dissections on preserved material, specimens and models. Let me take a specific example to illustrate the case. In studying the reproductive system not only would the student become familiar with the anatomy of the reproductive organs while studying their functions, but he should become familiar with the clinical examination of these organs where this is possible, even differentiating the normal from the abnormal. He would at the beginning of his career become conversant with the diagnosis of pregnancy and the collection and examination of serum, thus acquiring clinical sense and dexterity. He would see anatomy and physiology applied and his interest would be quickened and stimulated. Indeed, if anatomy and physiology were taught in relation to the living animal and departures from the normal were demonstrated, physiology would easily and logically establish bridgeheads or look-out points on pathology, a subject to be studied more completely later. In studying the circulatory system, it would be logical to indicate the principles of inflammation and repair. Even the layman may know something of the functions of the leucocytes; why should not the student's interests be guided some way along similar paths?

As the student progresses to the subjects of pathology, bacteriology and parasitology, these too must be learned against a background of field and clinical experience using the living animal, the *post-mortem* room and the laboratory bench. Stress should again be laid on mastering broad principles, and not details which pertain to the province of the specialist. On the other hand, those techniques that the clinician may and should use as aids to diagnosis, should be mastered and applied and their values and limitations known.

The student has by now acquired a considerable practical experience and knowledge of animal husbandry and is ready to explore this subject more fully, following it into the realm of experimental physiology and paying particular attention to nutrition. Veterinarians have made few contributions to the science of animal nutrition, except where mineral deficiency diseases are concerned, probably because our basic training has not been adequate for the techniques research on nutrition often demands, and because our interests have been canalised on contagious disease. But to-day metabolic disturbances in farm stock are becoming relatively more important and the veterinarian in many parts of the world must turn his attention to them. The veterinary student should become familiar with the methods of studying animal nutrition as it affects reproduction, lactation, growth and the production of animal produce such as meat, fat, eggs, wool, etc., extending his enquiries beyond the well-recognised metabolic diseases. If he is to become conversant with techniques he must see them used and participate in their application. Only a field station could provide the necessary facilities and thereby promote an extension of the veterinary interests leading to fresh fields of work. At the field station, moreover, a number of the more important metabolic diseases could be produced experimentally for research purposes and the enrichment of the student's clinical experience.

To-day the student acquires basic scientific knowledge in measured doses, and it is often lost as the doors of professional examinations shut behind him. The basis of modern veterinary science is biochemistry. I have assumed that the students of the future start with a good groundwork in physics and chemistry. On this foundation we should build a knowledge of biochemistry acquired by four years' work in the laboratories at the field station. Educationally this would be a sound investment for the veterinarian whether he be a practitioner, a field officer, or a research worker and teacher, placing him in a better position to assess and value new advances in knowledge. Should he devote himself to specialised research, he will understand the principles of the techniques he will use, enabling him to modify and adapt these techniques to his particular problems.

To-day's major subjects, medicine and surgery, have not been mentioned specifically. But in the four years at the field station medicine and obstetrics will have been covered almost completely and the principles of surgery will have been exploited in experimental physiology and in everyday work with the animals on the farm and in the hospital.

Similarly, the subjects listed to-day under veterinary hygiene will, with few exceptions, have been mastered and applied. In medicine and surgery, there may be a few threads to gather together, but medicine and surgery will cease to be regarded as major subjects by themselves, taught by many hours of note-taking in the lecture room. At the end of four years at the field station, the student should be free to spend his final year at his university or at a university abroad. He will possess a background of knowledge and experience and should have some freedom in the choice of subjects at which he will work during this final year. He may choose to devote much of his time to the small-animal hospital and clinic, or he may prefer to work in the laboratory. I have little doubt that the students in the faculties of arts, science and medicine who are fortunate enough to come into contact with mature veterinary students, trained observers of the phenomena of life, would benefit by these contacts.

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III.—By Wm. C. MILLER

Equine Research Station, Newmarket

Introduction

It might be useful first to consider the real objective of the college courses in veterinary education. Casual consideration of this objective might lead to the conclusion that the reason for veterinary educational courses is purely and solely to turn out men and women who can earn their living afterwards by clinical work in practice. But is this *casual* consideration adequate? I think there is still far too much complacency that a purely or almost purely *clinical* goal is good enough for most in the profession.

If the ambitions of the veterinary student run only to learning how to deal with clinical cases when called to them, and even then (if we are honest with ourselves) far too often dealing with them in a very empirical fashion, if that is the aim, then the course of education should be such as will provide the student with maximum experience of those clinical conditions with which he expects to have to deal when he goes into practice later. He should get opportunity to study, under guidance, the maximum number of diseased conditions in the living animal and in the cadaver. To provide this sort of facility, large and perhaps extravagant animal hospitals attached to each college, and plenty of work in the *post-mortem* rooms, abattoir or knackery, would seem to be desirable, and an educational course modelled closely upon classic medical lines, in which "walking the wards" figures prominently, would seem to be the answer.

However, there is an increasing mass of evidence, that can no longer be disregarded, which points to the fact that the veterinary practitioner is expected more and more to take an interest in far wider problems than those that are concerned only with disease. Not only is there an expectation on the part of clients of help from

the veterinary surgeon in breeding, feeding and management problems, but there is a very definite *demand* that the veterinary surgeon shall be better equipped to advise upon and guide the destinies of livestock than he has been in the past.

It would be true to say that, by and large, farmers, agriculturalists and other animal owners, are generally satisfied with what veterinary practitioners can do to help when the problem is one of disease only—its cure or control. In spite of individual owners who may grumble, the veterinary colleges have, I am sure, provided a satisfactory training in diseased conditions, and the young graduate is well fitted to *continue* to teach himself how to acquire the "art and science of veterinary medicine" when he leaves college, and to become a useful veterinary surgeon who will, generally speaking, fulfil the demands upon his purely clinical knowledge.

But I am equally convinced that the knowledge and experience the boy gets at those colleges which are conducted on traditional lines, is inadequate to fit him for that wider sphere of work in which the profession must now play a full part, and that consequently a change is needed.

It takes time for change—but changes do occur.

Important Subjects for which Field Station is Essential

It is perhaps useful to enumerate so far as possible the subjects or items of mental equipment, which I maintain (with strong convictions after some 27 years' experience in trying to teach with inadequate facilities and not much success), cannot be satisfactorily taught *except* at a field station, and which will play an increasingly important part in future veterinary education, and in the work of the veterinary practitioner.

These include:—

1. A working knowledge of the *practical* feeding of all classes of farm livestock, as well as theoretical considerations.

2. A sound acquaintance with day-to-day stable, stud, cowshed, feeding-yard, piggery, sheep and poultry flock routines. At least one method which is typical of the custom in one or other part of the country should be taught. (Though the customs may vary, the basic underlying principles are the same.)

3. Something more than a working knowledge of the principles and practice of livestock production, in all its aspects. I am sure that more is needed than a mere academic discourse upon milk-recording, butter-fat production, live-weight gains in bullocks or fat pigs, or trap-nesting. The students should see and handle the records during their collection and should help to analyse them later.

4. A knowledge of the varying farm processes and procedures through the year in their relationship to livestock management. The procession of the seasons and the crops; and the phases in animal health, growth and production, over the 12 months of the year, must be seen and experienced to be properly understood—especially by the urban-bred boy. Further, he needs them explained to him by someone of experience.

5. A first-hand acquaintance with all the phenomena of reproduction from service to birth, both in the normal and in the abnormal. This also must be under guidance; the untrained eye misses much that is of great importance unless it is pointed out and emphasised.

6. Closely linked with this is the process of normal growth and development of the young of all species.

7. Many relatively new techniques are now called for from the profession, which are either learned best or can only be learnt on the field station—pregnancy diagnosis in cows and mares, artificial insemination, milk sampling for specific purposes, various biological and other tests, and so on, and the general public is coming to regard all veterinarians as suitably equipped with and experienced in these, and will do so more and more in future.

8. Then there are certain clinical procedures which the newly qualified man should know and which it is at least desirable that he should have had some chance to perform before he applies them to his clients' animals and thereby, should something go wrong, expose himself to the dangers and unpleasantnesses of legal action. Instances such as epidural anaesthesia, rumenotomy, Ceasarean section in large or small animals, performance with skill of all the various certificated techniques in animals and birds, and so on, come to mind.

Value to the Teacher and Student

I would like to mention some of the points which seem to me to have been insufficiently appreciated by those who are not sympathetic to the idea of a large and well-equipped field station, attached to each teaching college.

1. The town-bred lad whose life up to the time he comes to college has been spent almost wholly either in the wildernesses of the streets or in the comparatively monastic seclusions of the secondary or public school, has a particular difficulty in understanding the rationale of the farm or the kennel. He is difficult to teach and liable to suffer in examinations and afterwards because of his background.

2. Demonstrations and lectures on the farm with instances to be shown and explained are more interesting and easy to understand than when given in the college classroom, and far more ground can be covered in a given time.

3. Cultivation of individual powers of observation is far easier with first-hand demonstration than by means of verbal pictures conjuring up in different students' minds, who knows what sort of different imaginative responses! In any case, many lecturers do not possess the faculty of painting a sufficiently vivid and precise word picture.

4. Day to day, week by week, month by month, changes and progress can be appreciated by a *series* of visual pictures of the animals themselves, far better than by any description. Who could adequately describe the progress of a litter of pigs from birth to weaning, or from weaning up to maturity?—or who could adequately explain the changes in conformation, temperament, appetite, etc., in the mare or cow throughout a normal pregnancy? Who could describe the changes in metabolism that occur in the store bullock when the grass comes in May? And so on.

5. The other great value is at least partly a psychological one. A field station should be so run that there is never a dull moment for lecturer or student during the whole of the course; the interest can be held and quickened at every class, by *showing* something fresh, by *doing* something new, and by *seeing* something interesting. How different from the dull and stuffy lecture-room in the month of June in a heat wave, is the shady side of a hedge in a meadow on the field station! And how much easier the lecturer's and the students' tasks: they both learn without knowing they learn, and they do not so easily forget.

The Ideal Field Station

I think perhaps I should give some indication of what I think should be the kind of field station attached to each of the teaching colleges. This may crystallise best the views I hold of the "place of the Field Station in Veterinary Education."

1. *Site.*—Sufficiently near to the college that not more than 30 or 40 minutes at most is occupied in travelling from door to door.

2. *Size, and Stocking.*—Large enough to accommodate a complete productive unit of each type of farm animal: *i.e.*, a stud of 12 to 15 horses; a herd of dairy cows of 30 to 40 in milk with followers; a beef herd of, say, 15 to 20 breeding cows; a flock of sheep (150 breeding ewes); 20 to 25 breeding sows, their surplus production being fattened; two poultry units, one intensive and one extensive, say, 800 to 1,000 birds in all. A small-animal breeding unit containing goats, rabbits, rats and mice.

Probably something of the order of 800 to 1,000 acres of average to good land would be necessary.

3. *Type and Scope of Activities.*—The farm should, as a whole, be run on commercial lines in accordance with the tenets of good husbandry, but the fullest opportunity should be taken to encourage all kind of experimentation by the college staff, aided by the students themselves. Where commercialism might clash with experimentation, the former would have to give way.

Facilities of all kinds should be available for practical pathological and bacteriological work, both as a matter of farm procedure, *e.g.*, in connection with milk production, disinfection, parasite control, any *post-mortem* work required, and so on, but one corner of the farm, or an isolated set of premises for preference, should be given up to the more purely pathological activities, experiments with diseased stock and so on.

A hospital for farm animals with all its essential equipment should be run in conjunction with the farm, but again upon a site sufficiently remote from the healthy stock to obviate risks from ambulatory disease. The hospital would have its own buildings, paddocks, drainage system and service roads, and be run by an *ad hoc* staff. Foodstuffs would be drawn from the farm, and any pasture management needed would be carried out by the farm staff (using mechanised equipment only, capable of being disinfected).

4. *Buildings.*—Apart from the pathological and hospital units mentioned, the only special buildings, beyond those normally required for an ordinary farm of this size and type, would be a large and adequate lecture-hall capable of taking several living animals of any species, and fitted with the usual aids, epidiascope, etc., and a good general animal husbandry laboratory, where foods and feeding-stuffs could be analysed, milk could be tested, water samples examined, sperm counts and other examinations carried out, blood, urine and general body fluids examined and tested, and where the livestock records could be kept and built up for future use (in a separate room).

A canteen of unpretentious dimensions would be desirable with the usual cooking facilities, and a little more generous than usual cloakroom accommodation provided for the student classes.

I do not regard the field station as requiring to be residential for a whole class at a time. There might, however, with some advantage, be, say, six to eight or ten bedrooms and a common room provided

in proximity to the canteen for the use of temporarily resident students or staff during holidays, or while carrying out work requiring constant attention, foalings or calvings, and so on. A kitchen garden of moderate size would reinforce the farm's other produce, eggs, butter, milk, etc., to supply the canteen.

I am afraid I have outlined very little new beyond what some of you may have already heard me outline before. I have a very clear realisation of the great need for the best facilities which can be obtained for the field stations of the colleges—and that as soon as possible. It is time, it is long past the time, that the veterinary profession was trained so as to enter more into the everyday policies of modern agriculture. The farmer is asking for more and more advice upon management and health in all classes of livestock. The advent of the modern chemotherapeutic agents means that apart from conditions associated with trauma, reproductive interferences, gonadectomies and so on, more and more diseases and clinical conditions are going to be easier to cure, prevent or control. The surgeon may find his work much restricted; preventive measures will be administered more and more by the owner or by lay staff inoculators, and the essential and fundamental role of the veterinary surgeon will change to that of diagnostician and general adviser upon health and disease.

It is urgently necessary that the student be so trained that he may play this part and give this advice to the best advantage of his clients. The establishment of an adequate, fully equipped and properly functioning field station for each college will, in my opinion, do more than any other single factor to put the veterinary profession into its real place in the community of the future.

I might end with a wider and graver consideration. Great Britain can no longer expect the rest of the world to feed it. Home production of all foods, especially those of animal origin, has to be greatly increased. No merest scrap of knowledge which can help to achieve this end can be neglected, and the more knowledge of animal production the veterinarian possesses, the bigger the part he can play in the struggle for greater efficiency, and the more he can contribute towards home sufficiency in the world of to-day and to-morrow.

REPORT

[Northern Rhodesia Veterinary Department: Report for Year 1946.]

There were 39 approved posts for Europeans and 181 for Africans, to cater for some 700,000 cattle, 112,000 sheep and goats, 55,000 pigs and about 1,000 horses and donkeys, the approximate value of the stock being about 4½ million pounds.

Continued success is recorded in the eradication of pleuro-pneumonia which has not been seen since May, 1944. Trypanosomiasis was most successfully treated with phenanthridinium compounds. A single injection of 1·25 mgm. per kg. in 3 per cent. solution of 1553 was most effective in the field.

Foot-and-mouth disease occurred throughout the year in some parts of the Territory and East Coast fever appeared in one district.

Although livestock management by the African remains primitive he is learning to accept disease prevention methods and particularly appreciates the value of phenanthridinium inoculation. Forty-two African veterinary assistants trained at the African Veterinary School, Mazabuka, were distributed throughout the territory.

One hundred and four pedigree cattle were imported during the year. Forty per cent. of the beef requirements are still imported from adjoining territories. The Cold Storage and Abattoir at Livingstone has proved its value in assisting in the eradication of pleuro-pneumonia and supplying meat from Barotse cattle, a source of supply untapped for 30 years. The only considerable exports of livestock products are hides and skins to the extent of about £60,000.

Research work was greatly restricted by shortage of staff.

G. B.

Weekly Wisdom

The race progresses only by the extra achievement of the individual. You are the individual.—Anon.

* * * * *

Thirteen months after being sold, an Alsatian bitch has walked 400 miles from South Devon back to her old home in Heaton Chapel, Stockport.

CLINICAL COMMUNICATION

May the Bull be Responsible for the Transmission of Non-Specific Infectious Sterility?

By
KNUD ROTTENSTEN, D.V.M., PH.D.,
Hjortshøj, Denmark

By the accumulation of a vast number of breeding records collected by the artificial insemination centres, it becomes increasingly apparent that the major part of infertility in cattle breeding is manifested without any detectable symptoms apart from the low conception rate. The low fertility may spread throughout an A.I. centre and for long periods make the breeding results quite disappointing. Under such circumstances iodine irrigation is extensively used in Denmark. The cows generally conceive sooner or later, and the ultimate success is frequently attributed to the iodine treatment. For obvious reasons there is no check on the effect of the treatment, which undoubtedly in a large measure is credited with what in reality is the effect of the time factor.

During the last two years I have had the opportunity of studying this problem of enzootic sterility in an A.I. centre with about 8,000 cows of the Red Danish milk breed and 3,000 cows of the Black and White Jutland breed. A detailed report will be published in *Forsogslaboratoriets Beretninger* in the near future, but the observations secured, particularly in reference to artificial insemination, may be of sufficient interest to justify a brief preliminary report.

Up to New Year, 1946, the conception rate in this centre had been satisfactory, but about this time it dropped from approximately 55 per cent. to slightly below 40 per cent., where it remained throughout the year. The fertility of the different bulls varied greatly without any corresponding variation in the semen concentration, motility, or ability to reduce methylene blue. Particularly among the more fertile bulls, there was a striking drop in the conception rate from first to second insemination, and a new increase in conception rate at later inseminations. The bulls of low fertility, on the other hand, did not show the drop from first to second insemination, but these bulls, too, showed a marked rise in the conception rate at later inseminations. This general trend is illustrated in the following figures for two heavily used bulls and for the whole centre.

	Number of inseminations				
	1st	2nd	3rd	4th	5th and later
Bull H—					
Number of inseminations	2,292	1,260	732	342	240
% pregnancies	54·7	35·0	41·7	54·1	61·7
Bull S—					
Number of inseminations	2,192	1,264	751	363	218
% pregnancies	30·4	27·8	40·9	46·3	50·9
Whole centre—					
Number of inseminations	7,868	4,726	2,936	1,491	982
% pregnancies	37·2	31·1	41·8	50·0	56·9

The peculiar drop in the conception rate from first to second insemination for the more fertile bulls was proved to be mainly due to the fact that a large proportion of the second inseminations were on return cows from bulls of low fertility. These cows were difficult to get settled, even when they were inseminated with semen from fertile bulls. The following figures from the two bulls mentioned above illustrate this point:—

2nd inseminations by bull:	Return cows from 1st inseminations by bull			
	H		S	
	Number	% Preg.	Number	% Preg.
H	420	44·5	488	31·8
S	359	31·2	464	21·3

The most likely explanation of the data seems to be that a sterility-producing factor has been transmitted from the bulls of low fertility to the cows. Hence, 0·3 per cent. sulphanilamide was added to the dilutor from January 29th, 1947. From this date a marked improvement in the conception rate took place. The figures for Bulls H and S during the period from March 1st to July 31st, 1947, are as follows:

	Number of inseminations				
	1st	2nd	3rd	4th	5th and later
Bull H—					
Number of inseminations	1,613	762	355	187	129
% pregnancies	55·8	54·6	48·2	55·6	61·2
Bull S—					
Number of inseminations	306	170	62	37	34
% pregnancies	51·6	53·5	54·8	43·2	55·9

In the limited data from this period there was no significant difference in the fertility of the return cows from the bulls. Several factors present themselves for the explanation of the change in the breeding results, but the fact that the improvement coincides with the use of sulphanilamide strongly suggests that this factor has played a part.

To what extent similar difficulties as those described above are in operation in natural breeding as in breeding by artificial insemination is as yet open to discussion. My impression is, however, that similar agents quite frequently are at work. In a small neighbouring centre working with two breeds, where I recently was requested to give advice, they had a bull of low fertility within each breed. The bull, G, settled only 34·7 cows at first insemination as compared to 55·8 for the four other bulls. When these four bulls were used on 236 returns from Bull G, the conception rate was only 33·9 per cent. as compared to 52·5 per cent. when they were used on 240 of their own returns. That a bull of low fertility does not always impair the fertility of his return cows goes without saying. This is also shown in the other breed from this centre, where only two bulls were used. Bull T settled 57·7 per cent. of the cows at the first insemination, the other bull, Ge, only 26·8 per cent. Bull T was used on 161 returns from Bull Ge and 63·4 per cent. conceived; on 68 of his own returns the conception rate was 63·3 per cent. It may be mentioned that the fertile bull, T, was a cryptorchid, whereas the bull, Ge, was normal. Here, as at the first centre, it was impossible to correlate conception rates with semen concentration, motility or the methylene blue test.

[We are glad to have the opportunity of publishing this communication from Dr. Rottensten, who is in charge of A.I. research in Denmark. Attention should, however, be drawn to the fact that the conception rate at Danish centres is based on pregnancy diagnosis, and for this reason it tends to be below the conception rate in this country, which is based on assumed pregnancy at three months after insemination.—Editor.]

ABSTRACT

[**Synthetic Insecticides in Colonial Development.** Symes, C. B. (1948.) Paper presented to the Royal Society of Arts.]

A series of trials to determine the practical application of DDT and B.H.C. (benzene hexachloride) against mosquitoes and tsetse fly are described.

The work was initiated in British Guiana, and directed against the malarial and yellow fever mosquitoes, *Anopheles darlingi* and *Aëdes aegypti*. A 5 per cent. DDT in kerosene solution was sprayed on to the walls of native barracks, at a dosage rate of 100 mgm. per square foot. The effect of the residual deposit was determined by the comparative numbers of mosquitoes in the treated and untreated barracks.

Six weeks after a single spraying, a 97 per cent. control was recorded and after ten months this figure was still above 90 per cent.

In a five-months period the numbers of malaria-infected persons showed a 50 per cent. reduction.

An incidental observation suggested that *Culex fatigans* appeared to be more resistant to the effect of DDT than the Anophelines.

The investigations were continued in Africa against the malarial mosquitoes, *Anopheles gambiae* and *A. funestus*. In this work both DDT and B.H.C. were used as a 5 per cent. solution in diesoline and, in addition, B.H.C. was employed as a suspension in water. A spray was applied at the dosage of 200 mgm. per square foot of wall, and repeated four times in 18 months. The mosquito population was apparently reduced by 60 per cent. to 70 per cent., but there was little effect on the incidence of malaria. However, in the case of the B.H.C. spray a 50 per cent. reduction in the number of malaria-infected persons was recorded during two wet seasons. No explanation for this result was offered. A study of the effects of different types of insecticide formulation, and the nature of a wall surface, showed that dried mud walls absorbed 85 per cent. to 90 per cent. of the insecticide when it was applied as a solution. Suspensions, however, were less susceptible to this action, and gave better results.

The investigation into the control of the tsetse fly, was divided into two parts:

(*a*) The application of the insecticide to vegetation.

(*b*) The spraying of cattle.

DDT and B.H.C. in kerosene and cotton seed oil were applied individually as a spray, to selected vegetation. Results showed a 50 per cent. to 80 per cent. reduction in the fly population during the week following the application.

It was found that the insecticidal solutions lost their potency after eight to ten days, as a result of absorption by the foliage. To overcome this difficulty four sprayings were completed in a 55-day period which was the pupation period of the tsetse fly concerned (*G. pàlpalis*) and a 96 per cent. control resulted.

DDT and B.H.C. smoke canisters were disappointing, as insufficient insecticide was deposited.

The spraying of cattle was introduced on the assumption that the application of an insecticide would form them into a poison bait for tsetse flies settling upon them. In this experiment a solution of DDT in cotton seed oil with 9 per cent. resin was used. The animals were sprayed at a dosage rate of 450 mgm. per square foot of hide. Due to absorption of the insecticide the spraying had to be repeated every four to five days, to maintain a toxic level of insecticide. In a trial mainly directed against *Glossina pallidipes*, 340 sprayed cattle were dispersed in groups over five square miles of tsetse-infested bush. Subsequent fly counts showed a reduction of 70 to 80 per cent. during the following 21 weeks.

D. W. J.

REVIEW

[**Le Chameau et ses Maladies.** By G. Curasson (Inspecteur Général des Services Vétérinaire des Colonies Françaises). (1947.) Paris: Vigot Frères. Pp. 462. Figs. 82.]

Although the camel is an animal of economic importance to only a relatively small proportion of the inhabitants of the world, it is of supreme importance in some places and of great account in others. There is a tendency to regard it as somewhat of a monstrosity by some who have not had occasion to appreciate its great merits, but those who have learnt its value have found ample reward for their labours.

The camel has its peculiarities and requires certain special attention. Some of its diseases are as individual as is the nature of their host. Primarily its diseases are closely related to those common to ruminants and to certain of the disease pathogens of the areas it inhabits. Perhaps sarcoptic mange and trypanosomiasis are its major scourges. It is subject to a variety of nutritional deficiency diseases resultant from the diet imposed on it by the conditions in which it lives and by the customs of its owners concerning what they regard as good for it or sufficient for its maintenance. Each decade of the last half century has seen progress in the attempts to lift the veil of ignorance that has surrounded so much that concerns the diseases of the camel and, as with the horse, the brave new world is prepared to give it greatly improved health just when it is past its zenith as an essential and much appreciated servant of mankind.

Veterinary pioneers have made great contributions to the welfare of camel kind as part of their outstandingly important role in Colonial development and British (notably A. S. Leese) and French veterinarians have been in the van in the march to open up the less advanced territories. One who can claim an honoured place in this respect is the author of this useful book on the diseases of the camel, Monsieur G. Curasson, the Inspector-General of the French Colonial Veterinary Service.

The book is divided into 17 chapters, dealing with the camel as a desert animal, general peculiarities of camel diseases, virus diseases, bacterial diseases, protozoan diseases, nutritional deficiency diseases, poisoning, the digestive system, the respiratory system, the genito-urinary system, the nervous system, the head and neck, the body and tail, the limbs, the skin and connective tissues and wounds and injuries. An additional section gives brief notes concerning camel husbandry, drugs commonly used, and parasites classfied according to the part of the body affected.

This is a book that should be in the hands of all veterinarians interested in camels. Its value would be considerably enhanced by a select bibliography, preferably at the end of each chapter.

The printing is clear and the illustrations are reasonably good, though not of high class. Some, notably No. 30, showing the teeth, are poor. The volume is paper bound and a purchaser would have to go to the expense of getting it properly bound. An alphabetical index would be much appreciated when a later edition is produced.

MEMOIR

Colonel George Henry Evans, C.B.E., C.I.E., M.R.C.V.S.

(Graduated Royal Veterinary College, 1884)

[Contributed]

With the passing of Colonel G. H. Evans a stage in veterinary history is closed. He was the last of the band of officers of the Army Veterinary Department who were in charge of civil veterinary work in India and Burma when, early in this century, the Indian Civil Veterinary Department was formed as a purely civilian service, and who elected to join the new department. This band were peculiarly fortunate in that they received civilian pay and, in addition, received military allowances according to their military rank, promotion in such rank being ensured by rules according to which stated numbers of senior ranks up to that of Colonel were allowed, so that promotions were made as vacancies occurred by death or retirement. This system was a relic of what may be termed "pioneering days" and was quite common in India a generation or two ago, many members of the administrative and judicial service having been recruited in this way in those days. Many of these officers had quite short military service, often not more than a year or two, or even less.

Evans must have been a great character. He was well known and much liked in Burma. He loved the country and his work and ran a good show.

As a veterinarian he was best known as an authority on elephants and he wrote a book on "Elephants and their Diseases" (1901) which has been much quoted. It is a useful, but not a remarkable book on the subject, even for the time when it was written, but there is so little on elephant diseases that it has achieved a position as a work of authority. It was reprinted in 1910.

Under Evans the Burma veterinary department developed somewhat differently from those of the Indian Provinces. From the beginning of the century, the Indian Veterinary Colleges had three-year courses of study, based roughly on that of European colleges, but, of course, with rather shorter curricula. In Burma a training school, called a college, was developed, but with a rather primitive short course and without a full staff of teachers. In Evans's time there was a European staff of three superintendents, with a Burmese and Indian field staff, some trained at Indian veterinary colleges, but most of them trained in the Burma school. These were the days of "serum alone inoculation" for rinderpest, and the control of the disease was only partially successful.

Burma is a country with particularly troublesome veterinary problems; communication between headquarters towns and the adjacent territory is difficult, and there are extensive land frontiers with China and Siam across which disease can be introduced; with a humid, warm, tropical climate serious diseases are endemic and there is much for a veterinary department to do.

Evans built up the basic services and with the advance in medicine his successors have been able to enlarge its scope. For this work he was made a Companion of the Indian Empire.

Evans joined the Army Veterinary Department in the year he qualified and proceeded to India the following year. In 1889-90 he was with the Chin-Lushai expedition, for which he was mentioned in despatches. He was one of the last veterinary officers to have experience of elephants on active service. They were abandoned for this purpose towards the end of the century because, it is understood, of their tendency to panic under fire. In 1890 he was appointed "Veterinary Instructor," Burma, and he remained in that country for 30 years, being placed in charge when a Civil Veterinary Department was created.

His name is linked with development of veterinary work in India and Burma. When the German Professors Robert Koch, Gaffky and Pfeiffer (of Pfeiffer's bacillus) visited India to demonstrate inoculation against rinderpest and to advise on the establishment of a research laboratory, Evans was one of the junior officers deputed to accompany them. In 1910 he officiated as Director-General Civil Veterinary Department, India and Burma, a post that was demolished soon afterwards in a wave of economy, together with high posts in other departments.

For a few years at the beginning of the century, a most useful periodical, the *Journal of Tropical Veterinary Science*, was published in India through the initiative of the late Colonel H. T. Pease, the last Inspector General. Evans was one of the editors and an occasional contributor.

As was commonly the case in India, Evans was an ardent volunteer and when the first world war broke out he held the rank of Colonel in the Rangoon Port-Defence Volunteers. He was mobilised and retained that command, and, it is believed, remained on that duty in that area throughout the war. He was mentioned in despatches and awarded the C.B.E. and was made an Honorary A.D.C. to the Viceroy.

He was interested in natural history and after his retirement studied orchids on the continent, and elsewhere studied bees, wasps and butterflies.

Autres temps autres moeurs. In his day and in the environment in which he developed, Evans was a great credit to his profession. He carried the respect of the officials of the administration inside and outside the profession and was regarded as a sound man.

By the time he retired veterinary science had possibly outpaced him, but it is likely that few of the modern graduates would have done better in dealing with the problems he encountered, and with the limited armamentarium of his day.

It is hoped that others, better acquainted with his more personal relations in Burma, will be able to write about other of his many activities. He was familiarly known as "Fatty Evans" and, more widely, as one of the officials who made his mark on the country of his temporary adoption.

QUESTIONS IN PARLIAMENT

Veterinary Staff (Salary Scale)

Lt.-Col. Boles asked the Minister of Agriculture whether he is aware that the dispute about the unsatisfactory scale of salaries for the veterinary staff of his Ministry is still unsettled; and if it has been decided whether negotiations on this matter can continue, following the issue of the White Paper about limitation of salary increases.

Mr. T. Williams: I do not agree that the scale is unsatisfactory. Taken as a whole it is at least as favourable as the scale for the scientific officer class. In any case the circumstances described in the White Paper on Personal Incomes preclude any revision at present.

. . . . .

Strain 19 Vaccine

Mr. Viant asked the Minister of Agriculture to what extent the Strain 19 vaccine for immunisation against contagious abortion is being produced by manufacturing chemists in this country; and by how many firms and to what extent it has been supplied or used.

Mr. T. Williams: Information is not available as to the quantities of Strain 19 vaccine produced by manufacturing chemists, but 520,000 doses of the vaccine were issued in 1947 by the Ministry's Veterinary Laboratory.

Pit Pony, Bedlington

Mr. Peter Freeman asked the Minister of Fuel and Power whether he is aware that a pit pony at Bedlington was recently considered to be unfit by the driver, who refused to work it; whether the pony was examined under working conditions; why permission was refused to the driver to be present during the examination, which took place in the stable; and whether he will cause further enquiries to be made, in view of the fact that other miners also considered the pony was not fit to do this work.

Mr. Gaitskell: I am aware that a putter at this Colliery, who was not the driver, alleged that a pony named "Ned" was unfit for work. The driver of the pony had made no complaint. "Ned" was examined by a veterinary surgeon and subsequently under working conditions by one of His Majesty's Inspectors of Horses in Mines, both of whom found the pony to be fit to perform its allotted task. As regards the last part of the Question, a further visit was made by the Inspector of Horses on June 9th. He was informed by the horsekeeper that no complaints had been received about the pony's fitness since his previous visit. He found that the pony had worked regularly, was in good condition and, in his opinion, had not been and is not being overworked.

Here is this week's thrilling instalment of our griping serial, *The Vengeance of Histolytica*:—

The Chief Amoeba brought his pseudopodium down on the table with a splosh, while the Anaerobes held their breath.

"I encyst!" he thundered.—From *The Lancet*, June 12th, 1948.

The Veterinary Surgeons Bill

Committee Stage in the House of Commons

During consideration of the Bill in Committee on June 24th, **Sir Thomas Dugdale** said that approximately 150 of those to be admitted to the Supplementary Register were people who were doing very good work for agriculture. "However much we may all welcome the provisions of the Bill and its underlying principles," he added, "I think we must, if necessary, be over-generous to these remaining people who are doing good work and are yet unqualified."

Mr. Linstead said that he hoped the Minister would pay particular attention to the period of seven out of ten years. On that the whole foundation of the Bill seemed to rest. "It is a question of his being satisfied and of our being satisfied that the people brought on to the Supplementary Register really have the knowledge, skill and experience required. If the Minister is satisfied on that, it seems that the sooner they can be brought into the profession, and made to feel that they really belong there and can be assimilated without any feeling of inferiority, the better. . . ."

Mr. Gerard Williams agreed that on the whole the unqualified man was a very fine man. Many of these men had been unable to obtain the right to put letters after their names owing to the 1914-18 war. They had gradually established themselves by their competence. They had shown their competence and deserved all that they could do for them.

Lt.-Col. Clifton-Brown endorsed what had been said, and asked whether these men would be allowed to help in the eradication of tuberculosis on exactly the same footing as qualified members of the profession. Sir John Barlow also hoped that tuberculin testing and many other things might be carried out by those on the Supplementary Register.

The Minister of Agriculture, replying to some of the points raised, said that he saw no reason why a father and son—the one being qualified and the other not—should not work together, although this would be for the Royal College to decide. As regards the tuberculin test, the unqualified man could be employed by the farmer, except for the final test for attestation. With regard to drugs, medicines and so forth, should any manufacturing chemist refuse to supply either the veterinary surgeon or a person on the Supplementary Register, that would be a case for the Royal College to deal with, and he hoped that they would deal with it very effectively. The Minister believed that a person who had been earning his living for not less than seven out of the last ten years in veterinary practice ought to be a thoroughly experienced person capable of doing the job and worthy of carrying a reasonable title.

Sir J. Barlow said that the Minister had given no indication whatever as to whether the Ministry would be prepared to employ the unqualified people in future on special kinds of work.

Mr. T. Williams: "Perhaps that is a matter for future consideration. At the moment our job is to get this Bill through the House of Commons. When the time for administration comes, I hope that a good deal of the heat and hot air which has been generated over the past few weeks will disappear. Then, perhaps, the Ministry of Agriculture and the Royal College of Veterinary Surgeons may find ways and means of making the maximum use both of the fully qualified and the less qualified persons in various forms of administration."

After the Minister had promised to look into the matter of admitting foreign veterinarians to the Royal College, and of inserting into the Bill words specifically authorising an unqualified father and a qualified son to practise together, Sir Thomas Moore moved his amendment.

This sought to make the grant of licences to employees of an animal welfare society contingent upon the society being unable to obtain the services of an adequate number of *acceptable* veterinary surgeons.

"We want to make sure that even if there are one or two veterinary surgeons available and unemployed—and I cannot conceive that position ever arising in the near or far distant future—the mere fact that a few of them were available or unemployed would not prevent the Minister from granting a licence. . . ." This amendment was withdrawn after an explanation of its implications by the Parliamentary Secretary. Another amendment, moved by Mrs. Manning and Sir Thomas Moore, to the effect that no licence under Clause 7 should have effect after 1958, was likewise withdrawn after the Parliamentary Secretary had explained that it would mean the termination of a man's employment after ten years.

Mr. Philips Price, as Chairman of the Parliamentary Scientific Committee, moved an amendment to prevent the use of the title "veterinary practitioner" by the unqualified. He felt that confusion might arise, and that, therefore, the word "veterinary" should be reserved for the qualified. The Association of Unregistered Animal Practitioners had agreed to the title "registered animal practitioner," which had also been recommended by the Chancellor Committee. "It was generally felt that the Supplementary Register should be used, not so much to confer a distinction, as to grant an exemption from prohibition. . . ."

Mr. York supported the amendment, and said that he found it difficult to discover the reasons which made the Minister so adamant on the question of title; to which Mr. Williams interposed "Common sense." The Bill, said Mr. York, was more than generous to the unqualified man. He could see no objection to the title "animal practitioner," in which the word "animal" was used as an adjective, as in "animal welfare," and he did not consider the Dentists Act as analogous. The Society of Veterinary Practitioners was composed entirely of qualified men. Was it fair that these 800 or more members should have to give up their title, which they had held a very long time, in order that it should be used by the unqualified men? He considered that the use of this name by the unqualified would do a great deal of harm, would unsettle the qualified men, and would disturb younger people working for a veterinary career.

Mr. Collins said that the matter seemed to have been decided by a number of extremely satisfactory precedents. The Minister had followed the practice where a similar closed shop had been established for the first time in various professions. "A great deal had been said about qualified and unqualified veterinarians, but I submit that all those covered by the Bill, whether they are on the Register or Supplementary Register, are qualified persons."

Members of the Royal College, Mr. Collins continued, had an outstanding qualification which no one could take away. It was utter nonsense to suggest that anyone, who really bothered about a man's qualifications, was indifferent to whether or not the man had the letters M.R.C.V.S. after his name. "Members of the Royal College are qualified by examination, and most of them by experience as well. Those who will be on the Supplementary Register are qualified by long experience and also by the approval of those who use their services. . . . Many of the veterinarians who have not qualified as members of the College have been practising for 20 years or more and served in the first world war. Largely for that reason they did not qualify. . . ."

Sir John Barlow said he believed that considerable pressure had been brought to bear on the Royal College to get them to agree to giving the unqualified the title of "veterinary practitioner." He thought it improper that the Minister should use such means to get agreement, and referred to the statement issued by the President of the Royal College. Willingness to accept the title of Registered Animal Practitioner, the recommendation of the Chancellor Committee, and the risk of confusion were points in favour of the amendment.

The Minister's Speech

The Minister said that the Council of the Royal College had been good enough to state that he had met them on almost every single point which they had raised, even when it meant deviating from the Chancellor Committee's recommendations, as it frequently did. The only point of difference was this small one of title. "Indeed, they suggested that, if I dared to deviate from the Chancellor recommendations, although they themselves invited me to deviate from these recommendations on many occasions, it would be sacrilege."

The Title of Veterinary Practitioner

After giving full consideration to all the representations made by the Royal College, the Government had come to what he regarded as a firm conclusion that, on the grounds of precedent, equity and common sense, they would allow the title "veterinary practitioner."

Over the last 70 years, Parliament had passed a number of Acts which established a clear pattern for the treatment of existing unqualified practitioners. The main features of this pattern were that a Statutory protection was given to the profession, and that a title was also always provided for the unqualified practitioner. Some professions had been closed in two stages; first, by the protection of the title, and then by the prohibition of the unqualified practitioner; and, at both stages, the existing qualified (*sic*) persons had been admitted to a register and had been given a professional title.

The veterinary profession, more than any other, was in this latter category. The protection of the professional title had been secured under the Act of 1881, and confirmed in 1920. The second stage was thus to restrict the unqualified practitioner. Referring to past legislation he mentioned the Midwives Act, 1902, which allowed midwives who had been practising for 12

months to go on the register and be allowed the title of midwife. In 1919, unqualified patent agents were admitted to the Register, and permitted to describe themselves as such. The same thing happened with architects. The Dental Acts of 1878 and 1921 did exactly the same for unqualified dentists, who were allowed to use the title "dentist" or "dental practitioner."

The veterinary surgeons themselves were responsible for the Act of 1881, which established a register of existing unqualified practitioners. In 1906, a prosecution resulted in a person being struck off by the Royal College, and a doubt arose as to whether or not a person on the unqualified register was subject to discipline by the governing body. Therefore, they promoted a Bill to make doubly sure.

The Act of 1920, passed at the request of the Royal College, enabled every single existing practitioner to call himself a veterinary surgeon. It was realised that if unqualified practitioners were to be subject to discipline, it would be useless to go to the House of Commons unless they were to allow a professional status, since control and status had always gone together. The Royal College recognised that in 1920.

It was easy to understand and sympathise with the views of fully qualified persons, but he found it difficult—in the face of all these Parliamentary precedents, and of the advantage which this Bill gave to veterinary surgeons—to believe that the Royal College was determined to impose on a small body of people worse treatment than other professions had imposed on the unqualified practitioner.

The memorandum circulated by the Royal College had made no mention of the question of control, which must be the dominant factor in the question of title. From a body who were the guardian of professional ethics, some reference to this might have been expected. It was not true that the titles "veterinary surgeons" and "veterinary practitioners" were the perquisites of the Royal College; the Act of 1920 had removed any doubts on that subject. The Royal College had said that the title "veterinary practitioner" would penalise their members. If that was so in 1948, how was it that it did not penalise them in 1920? After all, if any penalty was imposed, it was self-imposed by the Royal College themselves. "In any case," Mr. Williams added, "if we err in this Bill we err in very good company indeed, and I would like to invite the Royal College to cultivate a sense of proportion."

The Associations of the Unqualified and the Title

The memorandum laid emphasis on the willingness of an association of unqualified persons to accept the title "registered animal practitioner." There were two such associations, and the one referred to, he understood, had 70 members. The other claimed to have 150 members.

In sending him a copy, of the resolution addressed by the smaller society to the Royal College, the President had said he believed that his association was very favourably looked upon by the R.C.V.S. No doubt this was the case, but it was no reason why he (Mr. Williams) should look upon it as expressing the views of the 500 people, since the society had only 70 members. Moreover, there had been a surprising change of front. This same society had previously asked "as an act of British justice" for the title "Veterinary Surgeon (Registered)." The memorandum of the Royal College had not quoted—as one might have expected—that when the small society intimated acceptance of the title to the Royal College, they did so on two conditions:

> "They receive the full rights and privileges as given to members of the R.C.V.S.; that there is an approval committee set up for the registering of 'unregistered practitioners' and that this Association is represented on the committee."

Mr. Williams said that although the Royal College did not mention these conditions, he presumed that they had accepted them. The other society had consistently opposed the suggested title and urged that disciplinary control should carry with it the proper professional title.

The Chancellor Report

Great play had been made with the Chancellor Report, and there had been a good deal of deliberate misrepresentation, too. The only reason why the Government did not accept the recommendation of the Chancellor Committee on this point was simply that they did not agree with it. Members had been led to believe that it was a unanimous recommendation. It was nothing of the kind: "The decision taken . . . was by the narrowest of all possible majorities—it was based upon a casting vote. That has not been made public before. It is time that it was made public and that this alleged unanimity of the Chancellor Committee was blown sky high."

Captain Crookshank: "The Minister said the Chancellor Report was adopted only by the casting vote of the Chairman. Where is this information available?"

Mr. T. Williams: "I have given it to the right hon. and gallant Gentleman, but I do not know that it is obtainable from any other source, except, perhaps, the Committee itself."

Captain Crookshank: "This is a very serious point. . . . If there is nothing in the body of the document to say there was cross voting, or any voting at all, I think this announcement is a gross breach of confidence. . . ."

Mr. T. Williams: "I do not accept the . . . suggestion that I am betraying any confidence. The Royal College of Veterinary Surgeons as a body have known this from the very outset, since they had two members on the Chancellor Committee who knew that the decision was taken by the casting vote of the Chairman. I am not giving anything away. . . . The Royal College of Veterinary Surgeons have known from the very outset. My only complaint is that . . . they implied to members of Parliament in their memorandum that it was almost a unanimous decision. . . ."

Later Mr. Williams denied that his statement had contained any breach of faith or confidence. The only breach of faith, he said, was on the part of those who tried to make members believe that the decision had been based on unanimity.

Clauses 9 to 11 having been ordered to stand, the Committee adjourned until Tuesday, June 29th.

NOTES AND NEWS

Diary of Events

July 9th.—Annual Meeting of the Southern Counties Division, N.V.M.A., at Winchester (Cadena Restaurant), 3 p.m.

July 15th.—Social Outing of Dumfries and Galloway V.M.A., George Hotel, Penrith, 11.45 a.m.

July 16th.—Summer Meeting of Mid-West Division, at Shrubbery Hotel, Ilminster, 2 p.m.

July 17th.—General Meeting of Association of State Veterinary Officers at Royal Veterinary College, Camden Town, N.W.1, 2.15 p.m. Council Meeting, 10.30 a.m.

July 19th.—Meeting of the Editorial Committee, N.V.M.A., at 36, Gordon Square, W.C.1.

July 23rd.—Second Ordinary General Meeting of A.V.T. and R.W. (Southern Region) at Royal Veterinary College, Camden Town, N.W.1, 2 p.m.

July 23rd.—Annual General Meeting of Sussex Division at Old Ship Hotel, Brighton, 11.30 a.m. Council Meeting, 11 a.m.

Sept. 8th to 15th (inclusive).—N.V.M.A. Congress at Southport.

Sept. 11th-13th.—Annual Meeting and Dinner of the Royal (Dick) Veterinary College, Alumnus Association at Southport (Prince of Wales Hotel), 7.30 p.m.

* * * * *

PERSONAL

Births.—Clark.—On June 20th, 1948, to Janet, wife of H. M. Clark, B.Sc., M.R.C.V.S., Glenholme, The Drive, Gateshead, a son.

Young.—On June 18th, 1948, to Kathleen (*née* Massey) and Sydney Young, of Elton Villa, Bury, Lancs., a son—brother for Robin.

. . . . . .

Marriages.—Tutt—Becquet.—On June 22nd, 1948, at St. Bartholomew Hyde, Winchester, by the Rev. G. E. Beechey, John Berry Tutt, M.R.C.V.S., only son of Mr. and Mrs. J. F. D. Tutt, F.R.C.V.S., "Rothiemurchus," St. Cross, Winchester, to Denise Louise Marie Becquet, younger daughter of Major and Madame Jacques Becquet, of Brussels.

Young—Brown.—On June 26th, 1948, at the Church in the Orchard, Grange Park, N.21, Michael Young, M.R.C.V.S., to Olive J. B. Brown.

* * * * *

ANIMAL HEALTH TRUST

On Friday, June 25th, at 3.30 p.m., at Messrs. Fortnum & Mason's store, 181, Piccadilly, W.1, Miss Jessie Matthews, the stage and screen star, presented cheques to the winners of the recent Poster Competition organised by the Animal Health Trust.

* * * * *

ANIMAL HUSBANDRY IN INDIA AND PAKISTAN

In its issue of May 19th, *The Statesman* of India reports that problems relating to the livestock industry of India and Pakistan with emphasis on means for controlling diseases amongst animals, were discussed at a Press conference in Calcutta by Mr. D. D.

of the Army Veterinary Services, had just completed a two-month 10,000 miles tour of the two Dominions, ascertaining how best the livestock industry of the two countries can be placed on a profitable basis.

India and Pakistan, said Mr. Ogilvie, possessed nearly one-third of the world's cattle wealth—about 200,000,000 head of cattle including 45,000,000 buffaloes. In addition, they had large numbers of sheep, goats and poultry. From the viewpoint of ability to feed these animals, Mr. Ogilvie felt that the two Dominions had at least 50 per cent. more animals than they could maintain at a reasonable standard of health. There were over 136,000,000 acres of grazing land and, moreover, vast quantities of concentrates were produced suitable for fodder in both India and Pakistan. Yet, it was estimated that India was able to get not more than 60 per cent. fodder and less than 25 per cent. of the concentrates she needed.

Such overstocking, said Mr. Ogilvie, greatly impaired the efficiency of the livestock industry. Despite the huge cattle population, milk production in the vast sub-continent that was undivided India, allowed for a *per capita* consumption of only five to six oz. against 39 oz. in Britain and 45 oz. in Australia. Wool and hair production were likewise low.

Despite an acute world shortage, both India and Pakistan were experiencing great difficulty in disposing of their stocks of hides and skins. Of very poor quality generally, the latter were often pitted with holes (parasitic punctures).

The problem of overstocking could be dealt with in two ways: first, by reducing the animal population, and, secondly, by increasing the pasture acreage through better irrigation. None of these remedies, however, being applicable to livestock in India and Pakistan, except as a long-term measure, a more effective means of increasing the overall efficiency of livestock must be found. Better breeding and better husbandry would give some benefit, but the quickest and greatest return would be achieved by controlling the various diseases that were prevalent among livestock.

Government measures against the more serious "killing" diseases should be supplemented, said Mr. Ogilvie, by an all-out campaign directed against ticks and other parasites which were all too common in cattle there and which were responsible for a number of minor diseases. These latter, while not "killers," had a very debilitating effect on cattle and were causing, directly or indirectly, losses amounting to crores of rupees annually.

* * * * *

BRITISH COMMONWEALTH OF NATIONS SCIENTIFIC LIAISON OFFICES

The British Commonwealth of Nations Scientific Liaison Offices (London) have been opened on the third floor of Africa House, Kingsway, W.C.2. This (states *Nature*) is one of the measures to facilitate co-operation in the civil aspects of science within the Commonwealth decided on by the British Commonwealth Scientific Official Conference held in London in 1946. For a number of years several of the Commonwealth countries have maintained scientific liaison offices in London, and these, together with the ones now being established, will have their headquarters in Africa House. Each of these offices will continue to operate as in the past, retaining complete independence of action; but the convenience of occupying adjacent premises will facilitate co-operation between them on matters of common interest. For ease of reference to the group of independent offices as a whole, the title given above has been chosen, with the abbreviation B.C.S.O. (London) for common use. The offices taking part in the scheme are those of Australia, Canada, Central African Council, India, New Zealand, South Africa and the United Kingdom. Pakistan and the Commonwealth Agricultural Bureaux will be represented, and the Overseas Liaison Division of the U.K. Department of Scientific and Industrial Research will work in Africa House. In Washington the scientific liaison offices of the Commonwealth countries are associated under a similar scheme.

* * * * *

FOWL PEST

Fowl pest has been found to exist among some poultry at Leith, Midlothian. This is the first case of fowl pest in Scotland and has resulted from the illegal movement of some live birds from premises in Yorkshire where the disease also exists. The affected birds and those in direct contact with them have been slaughtered.

* * * *

Erratum.—Programme of Annual Congress at Southport: Paper, "Observations on Canine Encephalitis" and specimens relating thereto. It is regretted that mention of J. W. Trevan, M.B., B.S., B.SC., F.R.C.P., F.R.S., as co-author of this paper was made in error. This should have been D. J. Trevan, B.SC., M.B., B.S.

ADDRESSES OF DISEASE-INFECTED PREMISES

The list given below indicates, first, the county in which are situated the premises on which disease has been confirmed, followed by the postal address and date of outbreak.

SWINE FEVER:

Stafford.—Cotes House Farm, Cotes, Eccleshall, Staffs (June 23rd, 1948).

CORRESPONDENCE

The views expressed in letters addressed to the Editor represent the personal opinions of the writer only and their publication does not imply endorsement by the N.V.M.A.

Correspondents are requested to write as briefly as possible

SCHEMES FOR CONTROL OF BOVINE MASTITIS BASED ON THE BACTERIOLOGICAL EXAMINATION OF MILK SAMPLES

Sir,—Mr. Paul Crosfield's letter in to-day's issue prompts me to make some comment and enquiry.

Personally, during 1936-38, I tried out the above method of mastitis control with all reasonable care and with the help of standard methods in bacteriological examination of milk in this disease. In the case of all herds where the method was tried the results were entirely negative. Some lowered incidence of the disease might have been expected in the various herds, where, I may say, co-operation on the part of the owners was quite as good as one could expect, and with premises, equipment and cleanliness of a high standard. However, results were quite negative, for there was no improvement in regard to clinical mastitis or the incidence of new bacteriological cases, and the matter has made me keen to have a satisfactory answer to the following:—

Diagnosis.—I believe that most laboratories consider a milk sample as not infected with organisms if only a small number are present. The outlook of a clinician would be, in nearly every case, that even the smallest number of organisms in a quarter are capable of multiplication and, if pathogenic, capable of causing injury.

Reinfection and varieties of pathogenic organisms.—From the study of an experimental herd, Bull, Murnane, Petersen & MacLean* concluded that the infected udder is not the only reservoir of *Str. agalactiae* and their findings also show that in that herd clinical mastitis and increased cell count were associated as much with *Staphylococci* as with *Str. agalactiae*. At one time laboratories in nearly all cases concentrated on the isolation and recognition exclusively of *Str. agalactiae* and this may still be the case.

Metamorphosis of organisms in their structure and function.—It is a basic axiom in zoology that protoplasm is always changing, more or less, and influenced by the environment.

How much more frequently, nowadays, do we hear of this phenomenon being recorded in the case of micro-organisms. It seems quite possible that, given an udder injured mechanically, commensal organisms in changed body tissues may frequently acquire new structure and function and become identical with those commonly associated with mastitis. Obviously, if this is possible, new infection is always a probability in herds clear of the disease.

Although there is uncertainty about the above points in regard to the bacteriology of the disease, there is good reason to assert that factors apart from bacteria have an important effect on the structure and function of the cow's udder.

Gross mechanical injury to udder and teats almost invariably results in marked mastitis. How frequently must it be the case that less severe, almost unnoticeable, injury causes pathological change in milder form! Again, if we neglect to milk a heavy producer for several milkings there is a very much increased likelihood of the animal developing mastitis. Long continued congestion of the milk glands with milk does seem to have a definite detrimental effect on the udder tissue (and many a cow, for various reasons, does not milk out completely at each milking).

While there are so many doubts as to the part played by bacteria it seems advisable to keep in mind the basic principles of pathology and recognise that there are many factors causing disease other than the purely bacteriological ones.

Yours faithfully,

Thornhill, Dumfriesshire. A. J KENNEDY.
June 19th, 1948

* *Bulletin Council sci. and ind. Res. Aust.*, No. 134.

NYLON AS A DEEP SUTURE

Sir,—In his description of an interesting operation for vaginal prolapse in a bitch, Mr. R. N. Phillips places the blame, I think mistakenly, on his deep nylon sutures for a septic discharge from the operation wound. From his description I would suggest the source of the infection lay in some contamination during the operation when, as he explains, extensive bruising of all the tissues took place. I make this point because I believe that nylon as now obtainable is suitable for external, buried and and internal sutures. Since commencing its use in this hospital some eight months ago, on the initiative of my colleague, Mr. R. Churchill Frost, we have used it daily in all types of small-animal operations, including spays, pyometrectomies, herniae, etc. We have had no cases which showed sepsis directly attributable to deep nylon sutures. It is appreciated that the frequent use of penicillin and sulpha drugs in after treatment may have an important bearing here.

Yours faithfully,

Canine Defence Hospital, J. M. Mitchell.
Chestnut Avenue, Hampton, Middx.

June 18th, 1948.

* * * * *

MEASUREMENT OF HORSES AND PONIES

Sir,—With reference to the letter from Mr. J. Cochrane-Dyet on the above subject, I am in complete agreement with him that the position given in the instructions for the measurement of ponies is unusual but, against that, it makes for a complete standardisation and a prevention of various subterfuges that have from time to time been used by owners and attendants when having their ponies measured at shows.

The point in the instruction that gives me worry is the question of the ½ inch allowance for normal shoes. The normal shoe for a riding or jumping pony is generally a plate and the question then arises as to whether one should or should not allow the ½ inch.

I have written to the Association and suggested that the only fair and accurate method would be that no allowance is made for any type of shoe, but that a border-line pony should be measured in its bare feet.

Yours faithfully,

16, Ward Street, A. H. Robb.
Glasgow, C.4.

June 22nd, 1948.

* * * * *

THE VETERINARY SURGEONS BILL

Sir,—The growing volume of uninformed and unintelligent criticism of the Act and the events leading up to it prompts me to make a few pertinent observations.

Let me state at the outset that I have been a consistent opponent of "the closed shop" and the suppression of quackery by legislation, and that I have doubted the necessity for making such fundamental changes in our system of veterinary education, and finally that as an ex-secretary of the S.V.P. I resent deeply the fact that the title by which I preferred to be described should be "awarded" to a heterogeneous collection of uneducated individuals of doubtful value to modern scientific agriculturalists and small-animal owners.

But, if your correspondent had had the slight insight into political ways and means which was allowed to me in 1938-39 they would realise that once a Government department, with the backing of the Cabinet, whatever may be its political complexion, makes up its mind to introduce legislation, sectional interests such as those of the veterinary profession are of no moment. Steam roller tactics are applied and a *fait accompli* presented to the victims either openly or emerging from behind a veil of induced secrecy as in this case. It is one of the hollow mockeries of modern democracy that negotiations so profoundly affecting the habits and lives of useful, and often indispensable, members of the community are carried to a point from which there can be no turning back under the veil of officially induced secrecy.

Consequently, I feel strongly, despite the fact that I personally have little or no use for the Act and its provisions, that the quality and tenor of the criticism levelled collectively and individually at the unfortunate members of the Council, R.C.V.S., is at once unfair and un-British.

It strikes me that they have fought a sustained and not ineffective rearguard action—the only course open to them—and that in achieving substantial and useful amendments to the Act they are deserving of our thanks. Let us face the fact that without the efforts of the Council, R.C.V.S., this unnecessary Act would have been a much poorer legislative effort, and might well have impinged more heavily upon our traditional way of corporate life.

By all means let us continue to rail against the allocation of the title "veterinary practitioner," but cease to do so against the R.C.V.S.

Yours faithfully,

Fairfield, T. A. R. Chipperfield.
Crowborough Hill,
Crowborough, Sussex.

June 19th, 1948.

. . . . .

Sir,—The letter from Mr. George Gould which appears in this week's issue of *The Veterinary Record* cannot be classified as one of his best efforts.

Naturally, all members of Council are cognizant not only of what has been done, but in addition what has not. In the latter case, as he is *well aware*, at a Council meeting held on April 8th it was resolved that on the question of "title" a memorandum be prepared, giving all aspects of the matter at issue, and sent, together with a ballot paper, to *all members of the Royal College*. With this knowledge, would it not have been better if he had used his powers of oratory at a further Council meeting on April 29th, against the passing of any resolution relating to the title, until the opinion of the rank and file had been ascertained on an issue of such great importance to it, if not to him?

He will remember that on this occasion I expressed my views in no uncertain terms, and still adhere to them. He will find, too, that a member of Council, who is a close personal friend of both of us, has not minced matters even in public on the action taken on April 29th, stigmatising it as "frittering away the title."

Nevertheless, judging by the resolution passed at the Council meeting on June 3rd (and which appeared in the issue of *The Veterinary Record* dated June 12th), and to their credit, not a few of those who voted with Mr. Gould on April 29th went into reverse, no doubt on reflection, seeing that the previous one was untimely and precipitate, and when I believe they were to no small degree influenced by the "specific information" which, with others, Mr. Gould expounded at no short length.

In conclusion, may I refer my friend and neighbour to lines 215 to 228, Canto 1, of Butler's "Hudibras," which he will find in Volume 1.

Yours faithfully,

"Rothiemurchus," J. F. D. Tutt.
St. Cross, Winchester.

June 19th, 1948.

. . . . .

Sir,—I have read the text of the Bill and much of the correspondence regarding it. I dislike the proposed title for unqualified persons, but, in my opinion, Council, R.C.V.S., has taken the wisest course.

It is important that the Bill should go through and that the future of unqualified practice should be under control, otherwise we shall see ourselves swamped by the numbers of unqualified men and animal clinics arising throughout the country.

Here, I admit, we have no serious quack problem, but before the war I worked for eight years in London and would claim to have some knowledge both of individual quacks and of the work of some of the "animal clinics." Many animal owners did not distinguish between the veterinary surgeon and the quack with a white coat and a stethoscope, whatever his title.

So if the matter comes to the point of a "vote of confidence" here is mine.

Yours faithfully,

Ponthafren Surgery, S. H. Adams.
Newtown, N. Wales.

June 20th, 1948.

. . . . .

Sir,—*Re* this proposed conferring by law of the title of "Veterinary Practitioner" on the "quack," as amendment at Committee stage of the Bill seems to be the last hope of righting such an incredible wrong, not only to the veterinary profession and the domestic animal creation but surely also to the unqualified man himself, it is to be hoped that all members concerned will act unitedly and quickly on the recommendation to get in personal touch with their local M.P.s on the matter. Is it not possible that the time is also opportune to begin to press for that Ministry of Animal Health and Husbandry which seems as much now called for as the best in this Bill?

Yours faithfully,

"Cuilin," Kilmacanogue. H. Bisset.

June 21st, 1948.

Sir,—I am glad it has been stated that Mr. J. F. D. Tutt, as a member of Council, was well aware that the Council, R.C.V.S., have strenuously opposed the question of title "Veterinary Practitioner," finally forcing a Ministerial decision in which the Minister received the full support from his colleagues in the Cabinet. What is his object in making the statement that the question of title was surrendered "without so much as a skirmish," a statement he must know is untrue? The truth is that the President with the negotiating Committee fought a long and bitter battle—let us, then, have no more misleading letters from Mr. Tutt.

At the Council meeting at which the vote was taken, I asked if information could be given on the views expressed by Divisions—the Scottish, the North of Ireland, and I believe the Council, N.V.M.A., all agreed that short of actually sabotaging the Bill every effort should be made to prevent the word "veterinary" being used. Having read and studied the Bill and having all the information before me, I voted in favour of its acceptance, in the belief that taking the long view it was in the best interests of the profession.

Having lost the confidence of many of those responsible for my election to Council, I have tendered my resignation to the President, R.C.V.S.

Yours faithfully,

Berkeley Lodge, Blandford. F. Beckett.
June 19th, 1948.

. . . . .

Sir,—If the present Government was as anxious to expedite the passage of the Veterinary Surgeons Bill as it would have us believe, then it would have given way to R.C.V.S. on the question of the title for quacks rather than introduce controversial factors which would jeopardise the passage of the Bill. After all, Mr. Tom Williams stated in Parliament, "The need for the Bill is very great and very urgent."

Hasty legislation has been found wanting before to-day and speed in this case had a certain disadvantage for the profession.

Had the Council of the R.C.V.S. called the Minister's bluff, he would have had to climb down if his words meant anything at all.

Instead the policy of the Council of R.C.V.S. was one of weakness, which the Government was quick to seize.

It is a source of amazement to me that the Minister can reconcile his two attitudes towards the profession.

In connection with the Bill, a high status for the profession is demanded and yet when giving a status to the Veterinary Surgeons in his own department, as reflected in the salaries of the Veterinary Inspectors, then this is low.

How different has been the masterly handling and attitude of the present president of the N.V.M.A. when dealing with the Minister. I feel sure that if this firm attitude is maintained the Minister on this occasion will not have things all his own way.

I think the time has come for the president of the N.V.M.A. to initiate discussions in all the Divisions on the question of the adoption of the title "Doctor" by holders of the M.R.C.V.S.

After all its adoption would place the profession on a footing with Continental and American Veterinarians. This lead would be followed by the Empire and would do much to raise the status of this profession.

Yours faithfully,

29, St. Johns Hill, C. W. M. Walker, M.R.C.V.S.
Shrewsbury,
Salop.
June 21st, 1948.

. . . . .

[The above letters were received for publication before the Committee stage of The Veterinary Surgeons Bill.—Editor].

* * * * *

JEWISH AND MOHAMMEDAN METHODS OF SLAUGHTER

Sir,—Mr. Bywater in his admirable letter to you, and the many further correspondents which have followed him, have with the exception of Mr. Zeitlyn, condemned the Jewish method of slaughter both from the point of view of the preparations and the actual act of slaughter. May I, as a veterinary practitioner, enumerate the following reasons why I firmly hold the opinion that this method is not only efficient and considerably less cruel than many methods of euthanasia adopted by the profession, but also, not nearly as objectionable as Mr. Bywater would make us believe.

While the casting of animals is a matter of almost daily occurrence to most veterinary surgeons engaged in large-animal practice, it seems to be the main objection Mr. Bywater has to the method of slaughter. Horses, which are considerably more sensitive than bovines, have been thrown by us for many years. We then proceed to perform many painful operations in which the law allows us either to use no anaesthetic at all, or to subject the animal to the nauseating vapours of chloroform under which it struggles for many minutes before it succumbs.

The pain involved in castrating a horse without anaesthetic by the caustic clamp or even the emasculator, whether standing or cast, and whether performed by a veterinary surgeon or layman (as allowed by the new Bill) must be very much greater than the few seconds which may elapse between cutting the blood-vessels of a bullock, by a highly trained slaughterer, and its loss of consciousness.

I fully agree that the casting, if necessary, should be done as well as possible; that is the responsibility of the slaughterhouse authorities and their veterinary advisers. Any kind of cruelty by slaughtermen in casting or handling of animals intended for slaughter by any method must be dealt with much more rigorously than in the past, possibly with the help of the Unions concerned.

The actual cutting of the blood-vessels is done with great speed and efficiency. The loss of consciousness occurs, according to experts, in one to ten seconds at the utmost. This compares very favourably with most methods employed by veterinary surgeons and animal "welfare" societies for the euthanasia of small animals, which are liable to more suffering than cattle. The use of chloroform, so popular with the welfare societies, causes the animal, which has an acute sense of smell, very great pain and distress, lasting according to the report of the Special Committee on Euthanasia, up to eight minutes. The only reason which is put forward to maintain this gross suffering is "economy," although we all condemn the use of prussic acid, it is still in use.

The use of the captive bolt method requires expert handling. In my own experience there have been at least two cases where horses have recovered full consciousness after being shot by veterinary surgeons, both fully conversant with the use of this instrument. How can we then say that slaughtermen, not all of them expert, shall use this instrument when even in the hands of the above mentioned committee this method has not proved satisfactory. Allowing, as they did for even a one per cent. error in the use of the captive bolt it would cause more suffering than the Jewish method of slaughter.

Electrical stunning is subject to about the same margin of error and relies on the assumption—which has never been proved—that the animal is unconscious when the current is on.

I contend that the Jewish method of slaughter is no more cruel than any other method of euthanasia at present evolved, and that to try to change the regulations in such a way as to prevent the slaughter of animals according to the Jewish law (as interpreted by the recognised ecclesiastical authorities) is not only an interference with the consciences of many people but totally unwarranted by our present knowledge.

Yours faithfully,

Alfred W. Moller, M.R.C.V.S.

326, West End Lane,
London, N.W.6.
June 20th, 1948.

DISEASES OF ANIMALS ACTS, 1894 TO 1937, AND AGRICULTURE ACT, 1937 (PART IV).

Summary of Returns of Confirmed Outbreaks of Scheduled (Notifiable) Diseases

Period	Anthrax	Foot-and-mouth	Fowl Pest	Parasitic Mange*	Sheep Scab	Swine Fever
June 1st to 15th, 1948	3	—	9	—	—	1
Corresponding period in—						
1947	5	9	117	—	1	1
1946	2	2	—	—	—	13
1945	4	2	—	—	1	37
Jan. 1st to June 15th, '48	47	—	190	1	26	17
Corresponding period in—						
1947	44	92	450	1	23	15
1946	49	26	—	4	34	265
1945	52	79	—	5	38	489

NOTE.—The figures for the current year are approximate only.

* Excluding outbreaks in Army Horses.